

**REMARKS**

Claims 1 through 17 are pending in this application, of which claims 6 through 17 stand withdrawn from consideration pursuant to the provisions of 37 C.F.R. § 1.142(b). Accordingly, claims 1 through 5 are active. Claim 1 has been amended. Care has been exercised to avoid the introduction of new matter. Indeed, adequate descriptive support for the present amendment should be apparent throughout the originally filed disclosure noting, for example, Figs. 2A – 2F and the related discussion thereof in the written description of the specification. Applicants submit that the present Amendment does not generate any new matter issue.

**Claims 1 through 5 were rejected under 35 U.S.C. § 103 for obviousness predicated upon Parikh in view of Gates et al.**

In the statement of the rejection the Examiner referred to Fig. 4F of Parikh asserting the disclosure of a semiconductor device corresponding to that claimed, except for the claim requirement that the dielectric constant of the etching stopper be greater than that of the first and second dielectric films. The Examiner then referred to Gates et al. and concluded that one having ordinary skill in the art would have been motivated to modify the particular semiconductor device disclosed by Parikh by forming the etching stopper with a dielectric constant greater than that of the first and second dielectric films. This rejection is traversed.

There is a fundamental difference between the claimed semiconductor device and the semiconductor device disclosed by the applied references, particularly the primary reference to Parikh, that undermines the obviousness conclusion under 35 U.S.C. § 103. Specifically, independent claim 1 is directed to a semiconductor device comprising, *inter alia*, an etching stopper and a metal interconnect, wherein the upper surface of the etching stopper is located

under the upper surface level of the metal interconnect and the under surface of the etching stopper is located over the under surface level of the metal interconnect and, moreover, the metal interconnect is embedded in an area at least including a trench formed in the second dielectric film using the etching stopper. No such structure is disclosed or suggested by Parikh.

Specifically, Parikh neither discloses nor suggests a semiconductor device “wherein the upper surface of the etching stopper is located under the upper surface level of the said metal interconnect and the under surface of said etching stopper is located over the under surface level of said metal interconnect” as in the claimed invention. Indeed, advertizing to Fig. 4 of Parikh, the dielectric layer (414) functioning as an etching stopper defines the under surface of the metal interconnect (450). It is **not**, repeat **not**, the etching stopper (418) that defines the under surface of the metal interconnect (450). Rather, metal interconnect (454) should be noted in connection with etching stopper (418), or metal interconnect (416). Again, the under surface of metal interconnect (450) is not defined by etching stopper (418).

Applicants would further note that Parikh discloses nothing more than what Applicants acknowledge to be prior art in Fig. 1D in the present application. This is because the relative position of etching (418) of the device of Parikh with respect to metal interconnect (454) or metal interconnect (460) is no different from that illustrated in Fig. 1D.

Based upon the above apparent **structural differences** between the claimed semiconductor device and Parikh’s semiconductor device, it should be apparent that even if the applied references are combined as suggested by the Examiner, and Applicants do **not** agree that the requisite fact-based motivation has been established, the claimed invention would **not** result.

*Uniroyal, Inc. v. Rudkin-Wiley Corp., 837 F.2d 1044, 5 USPQ2d 1434 (Fed. Cir. 1988).*

Applicants, therefore, submit that the imposed rejection of claims 1 through 5 under 35 U.S.C. § 103 for obviousness predicated upon Parikh in view of Gates et al. is not factually or legally viable and, hence, solicit withdrawal thereof.

To the extent necessary, a petition for an extension of time under 37 C.F.R. 1.136 is hereby made. Please charge any shortage in fees due in connection with the filing of this paper, including extension of time fees, to Deposit Account 500417 and please credit any excess fees to such deposit account.

Respectfully submitted,

McDERMOTT WILL & EMERY LLP



Arthur J. Steiner

Registration No. 26,106

600 13<sup>th</sup> Street, N.W.  
Washington, DC 20005-3096  
Phone: 202.756.8000 AJS:MWE:ntb  
Facsimile: 202.756.8087  
**Date: October 11, 2005+**

**Please recognize our Customer No. 20277  
as our correspondence address.**